Applicants : Adam T. Lake, et al.   Attorney's Docket No.: 10559-580001
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AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A computer-implemented method of generating a shadow for a three-dimensional model having an infrastructure that includes a <u>virtual</u> bone, the method comprising:

projecting the <u>virtual</u> bone onto a surface; and

generating the shadow on the surface based on a projection of the <u>virtual</u> bone, <u>wherein the shadow comprises a shape that is formed on the projection of the virtual bone, and wherein generating comprises forming the shape by distorting at least part of the projection of the virtual bone</u>.

2. (Currently Amended) The method of claim 1, further comprising locating a virtual light source in an environment that the three-dimensional model inhabits;

wherein projecting the <u>virtual</u> bone comprises:

drawing lines from the virtual light source, through points on the <u>virtual</u> bone, onto the surface; and

connecting points at which the lines intersect the surface.

3. (Currently Amended) The method of claim 1, wherein generating the shadow further comprises:

~~creating a shape over at least part of the projection of the bone; and~~

mapping texture onto the shape.

4. (Currently Amended) The method of claim 3, wherein ~~creating~~ forming the shape comprises obtaining a polygon from the projection of the virtual bone.

5. (Currently Amended) The method of claim 3 ~~1~~, wherein mapping texture onto the shape comprises mapping a fuzzy texture onto edges of the shape.

6. (Original) The method of claim 1, further comprising receiving data that corresponds to a size and shape of the shadow;

wherein the shadow is generated based on the data.

7. (Currently Amended) A computer-implemented method of generating a shadow for a three-dimensional model having an infrastructure that includes a virtual bone, the method comprising:

generating a bounding volume for the virtual bone, the bounding volume having a shape that substantially corresponds to a shape of the virtual bone, wherein generating the bounding volume comprises expanding the virtual bone in three-dimensional space; and

generating the shadow by projecting a shape of the bounding volume onto a surface.

8. (Original) The method of claim 7, further comprising locating a virtual light

source in an environment that the three-dimensional model inhabits;

wherein projecting the shape comprises:

drawing lines from the virtual light source, through locations on a surface of

the bounding volume, onto the surface; and

connecting points at which the lines intersect the surface.

9. (Original) The method of claim 7, wherein generating the shadow further

comprises mapping a texture onto the shape of the bounding volume projected onto the

surface.

10. (Original) The method of claim 7, further comprising receiving data that

corresponds to a size and shape of the shadow;

wherein the shadow is generated based on the data.

11. (Currently Amended) An article comprising a machine-readable medium that

stores executable instructions to generate a shadow for a three-dimensional model having an

infrastructure that includes a <u>virtual</u> bone, the instructions causing a machine to:

project the <u>virtual</u> bone onto a surface; and

generate the shadow on the surface based on a projection of the <u>virtual</u> bone<u>,</u>

<u>wherein the shadow comprises a shape that is formed on the projection of the virtual bone,</u>

<u>and wherein generating comprises forming the shape by distorting at least part of the</u>

<u>projection of the virtual bone</u>.

12. (Currently Amended) The article of claim 11, further comprising instructions to

locate a virtual light source in an environment that the three-dimensional model inhabits;

wherein projecting the <u>virtual</u> bone comprises:

drawing lines from the virtual light source, through points on the <u>virtual</u>

bone, onto the surface; and

connecting points at which the lines intersect the surface.

13. (Currently Amended) The article of claim 11, wherein generating the shadow

comprises:

~~creating a shape over at least part of the projection of the bone; and~~

mapping texture onto the shape.

14. (Currently Amended) The article of claim 13, wherein ~~creating~~ <u>forming</u> the

shape comprises obtaining a polygon from the projection of the <u>virtual</u> bone.

15. (Currently Amended) The article of claim <u>13</u> ~~11~~, wherein mapping texture onto

the shape comprises mapping a fuzzy texture onto edges of the shape.

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16. (Original) The article of claim 11, further comprising instructions to receive data that corresponds to a size and shape of the shadow;

wherein the shadow is generated based on the data.

17. (Currently Amended) An article comprising a machine-readable medium to generate a shadow for a three-dimensional model having an infrastructure that includes a virtual bone, the instructions causing a machine to:

generate a bounding volume for the virtual bone; and

generate the shadow by projecting a shape of the bounding volume onto a surface, the bounding volume having a shape that substantially corresponds to a shape of the virtual bone, wherein generating the bounding volume comprises expanding the virtual bone in three-dimensional space.

18. (Original) The article of claim 17, further comprising instructions to locate a virtual light source in an environment that the three-dimensional model inhabits;

wherein projecting the shape comprises:

drawing lines from the virtual light source, through locations on a surface of the bounding volume, onto the surface; and

connecting points at which the lines intersect the surface.

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19. (Original) The article of claim 17, wherein generating the shadow further comprises mapping a texture onto the shape of the bounding volume projected onto the surface.

20. (Original) The article of claim 17, further comprising instructions to receive data that corresponds to a size and shape of the shadow;

wherein the shadow is generated based on the data.

21. (Currently Amended) An apparatus for generating a shadow for a three-dimensional model having an infrastructure that includes a <u>virtual</u> bone, the apparatus comprising:

a memory that stores executable instructions; and

a processor that executes the instructions to:

project the <u>virtual</u> bone onto a surface; and

generate the shadow on the surface based on a projection of the <u>virtual</u> bone<u>,</u> <u>wherein the shadow comprises a shape that is formed on the projection of the virtual</u> <u>bone, and wherein generating comprises forming the shape by distorting at least part</u> <u>of the projection of the virtual bone.</u>

22. (Currently Amended) The apparatus of claim 21, wherein the processor executes instructions to locate a virtual light source in an environment that the three-dimensional model inhabits; and

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wherein projecting the bone comprises:

drawing lines from the virtual light source, through points on the <u>virtual</u>

bone, onto the surface; and

connecting points at which the lines intersect the surface.

23. (Currently Amended) The apparatus of claim 21, wherein generating the

shadow comprises:

~~creating a shape over at least part of the projection of the bone; and~~

mapping texture onto the shape.

24. (Currently Amended) The apparatus of claim 23, wherein ~~creating~~ <u>forming</u> the

shape comprises obtaining a polygon from the projection of the <u>virtual</u> bone.

25. (Currently Amended) The apparatus of claim <u>23</u> ~~21~~, wherein mapping texture

onto the shape comprises mapping a fuzzy texture onto edges of the shape.

26. (Original) The apparatus of claim 21, wherein:

the processor executes instructions to receive data that corresponds to a size and

shape of the shadow; and

the shadow is generated based on the data.

27. (Currently Amended) An apparatus for generating a shadow for a three-dimensional model having an infrastructure that includes a <u>virtual</u> bone, the apparatus comprising:

a memory that stores executable instructions; and

a processor that executes the instructions to:

generate a bounding volume for the <u>virtual</u> bone<u>, the bounding volume having a shape that substantially corresponds to a shape of the virtual bone, wherein generating the bounding volume comprises expanding the virtual bone in three-dimensional space</u>; and

generate the shadow by projecting a shape of the bounding volume onto a surface.

28. (Original) The apparatus of claim 27, wherein the processor executes instructions to locate a virtual light source in an environment that the three-dimensional model inhabits; and

wherein projecting the shape comprises:

drawing lines from the virtual light source, through locations on a surface of the bounding volume, onto the surface; and

connecting points at which the lines intersect the surface.

29. (Original) The apparatus of claim 27, wherein generating the shadow further comprises mapping a texture onto the shape of the bounding volume projected onto the

surface.

30. (Original) The apparatus of claim 27, wherein

the processor executes instructions to receive data that corresponds to a size and

shape of the shadow; and

the shadow is generated based on the data.